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Page(s): Page 677, Page 678, Page 679, Page 680

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1873. *Zalophus lobatus*, Counsellor Seal, Scott, 'Mammalia, Recent and Extinct,' p. 21.

Hab. King George's Sound (*Quoy & Gaimard*); Houtman's Abrolhos (*Gould*).

Pelage brown in males, with a distinct yellow space on the back of the neck; in females grey, becoming a dirty white on the neck and head; red under the body. The line of demarkation between the red and grey is said to be very distinctly marked. No under-fur. Nails on all five digits of "pes." Snout short; nostrils on upper surface.

Teeth 36, sometimes 34; first four upper and lower molars with anterior cusp; last two upper and last lower tricuspid. Skull rounded behind orbits. Opening of palate wide, V-shaped.

4. OTARIA HOOKERI.

1844. *Arctocephalus hookeri*, Gray, Zool. Erebus and Terror, Mammalia, p. 4.

1871. *Phocarctos hookeri*, Gray, Suppl. to Cat. of Seals and Whales, p. 15.

1873. *Otaria hookeri*, J. W. Clark, P. Z. S. p. 750.

Hab. Auckland Island (*J. W. Clark*); Campbell Island (*French Expedition*, 1875); coast of New Zealand, subfossil (*Dr. Hector*).

I suggest this rearrangement of the Australian *Otariidæ* with much diffidence, as the quantity of material at present available is quite insufficient for any thing like certainty respecting them. I am especially doubtful about the identity or difference of *O. forsteri* and *O. cinerea*. Allen (*l. c.* p. 40) considers that "Péron, under the name *Otaria cinerea*, undoubtedly referred to *Zalophus lobatus* of recent writers." Still the additional cusp to the molar teeth in the latter would seem to preclude the possibility of their being the same.

9. On the Generic Peculiarities of the distinctively Madeiran *Achatinæ* of Lowe. By the Rev. R. BOOG WATSON, F.R.S.E., F.G.S. Communicated by J. GWYN JEFFREYS, Esq., LL.D.

[Received October 27, 1875.]

I have to propose a new genus for certain species of Madeiran Mollusca hitherto classed as *Achatinæ*.

The name *Lovea* is a tribute to the labours of Mr. Lowe in connexion with these species, as, indeed, with the whole Natural History of Madeira.

The distinctive characters of the genus in which it differs from *Achatina* are:—

The mantle extends beyond the edge of the aperture all round. It is thinly spread over the outside of the shell, and extends like a tongue backwards behind the posterior corner of the aperture.

The tail carries a mucous gland and is abruptly truncate.

This genus thus bears to *Achatina* the same relation that *Arion* does to *Limax*, and *Nanina* to *Helix*.

All the members of the genus have the shell highly polished, its brilliant lustre being obviously connected with the perpetual movement upon it of the mantle, and especially of its posterior prolongation, a movement also eminently characteristic of *Nanina*.

In spite of very careful search no dart could be found.

The jaw is horny, light brown, crescent-shaped, crossed from behind forwards by numerous small converging ridges, one of which forms a distinct median line. The edge is not toothed, but forms a continuous curve. The radula consists of numerous rows of multitudinous teeth. The centre tooth is minute, with a sharp central point and a faint point on either side like a shoulder. It is attached to a strong, flat, basal plate, shaped like the crescent-formed cutting-knife of a shoemaker or half a dumb-bell. The lateral teeth are

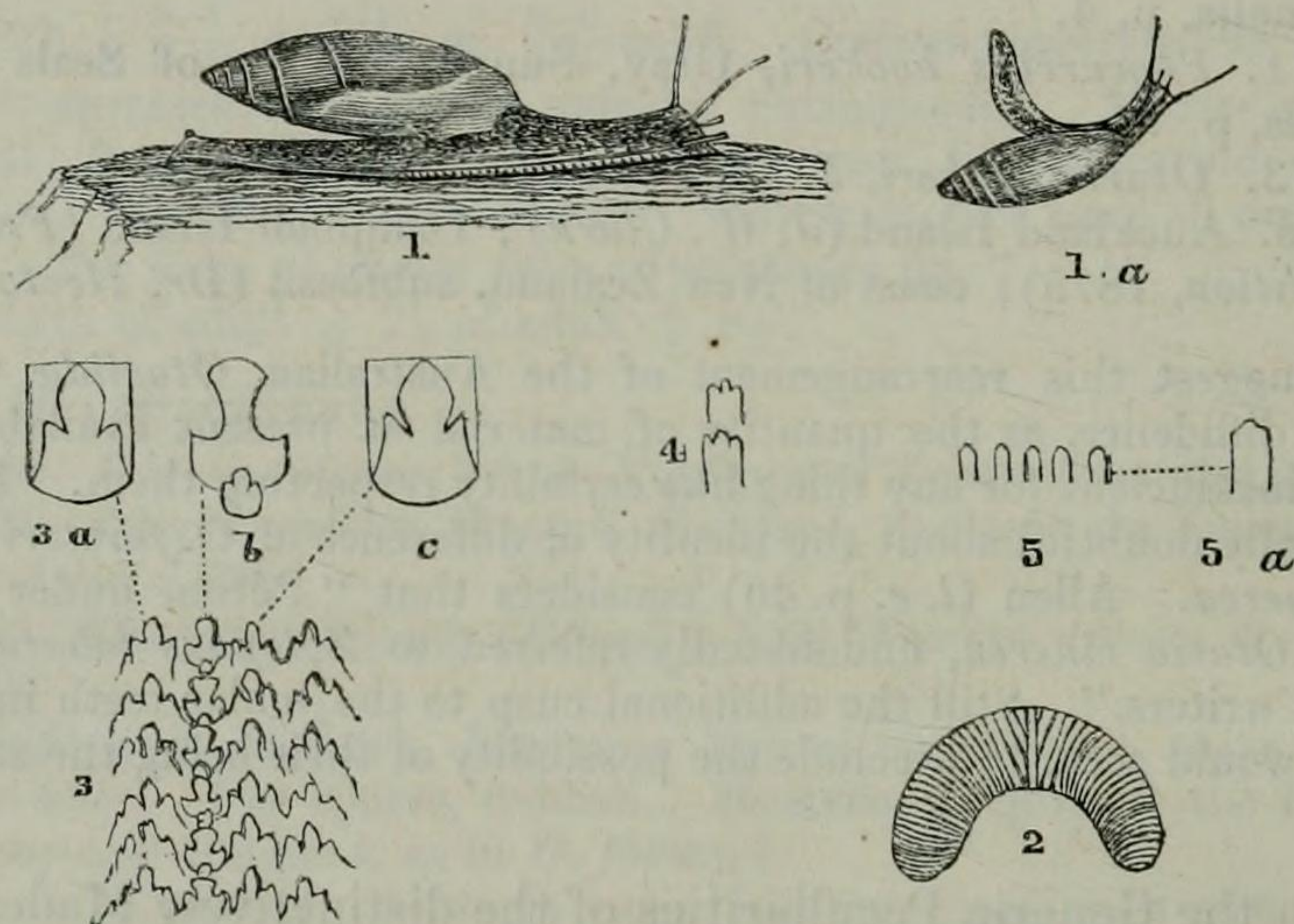


Fig. 1. *Lovea (Achatina) tornatellina*, Lowe. 1. enlarged; 1 a, natural size.
 2. Jaw, greatly magnified.
 3. Radula, central and first lateral teeth, magnified.
 3. a, c, left and right laterals; b, central tooth: greatly magnified.
 4. Teeth intermediate between the centrals and extreme edge, greatly magnified.
 5. Teeth at extreme edge, magnified; a, one of the same, greatly magnified.

much larger, with a strongly developed centre point and two broad sharp shoulders. They are attached to flat, square, basal plates. As they pass over from the centre, they become more and more rudimentary (the outer shoulder first retreating toward the base), till they become at last mere square specks with an undefined back and a faintly serrated front edge. I believe that these features will be found common to all the distinctively Madeiran species of this group. Of course *Achatina acicula* and *Cochlicopa lubrica* (the *maderensis*

of Lowe) fall off from it; for they certainly have not the characteristics of the genus. Does the *Achatina folliculus*, Gron., a common European species, belong to this new genus or not? Surely, had it possessed the generic peculiarities mentioned above, the fact would long ago have been noticed. I have not been able as yet to decide the question, and have, indeed, to regret that so few of the distinctive Madeiran species have been examined by me. It was but very shortly before leaving the island that I noticed the caudal gland in *A. tornatellina*; and for the other species here described, I have been indebted to the kindness of my friend Mr. Moniz, who, after considerable difficulty and delay, procured from Porto Santo the other species here described.

LOVEA (ACHATINA) MELAMPOIDES, Lowe.

Colour. The general effect is light, of a faint ruddy brown tinge. The foot is gelatinous, translucent, white, with a faint tinge of brown; that of the body is a slightly darker tinge of brown which extends along above the edge of the foot to the gland at the tail. The head and neck are slightly browner than the body, and are scored with the long grey muscles of the tentacles.

The *mantle* is of the same colour as the body. The mantle-lobe, in my specimens, which had been long in confinement, was small and thin and transparent, but quite distinctly lapping out beyond the aperture and turned back upon the edge and prolonged posteriorly.

Tentacles rather long, but not thin, seldom extended, terminating in small round bulbs, on the upper surface of which is an ocular lens shaped like a thumb-nail, in which the minute black eyes appear. The under tentacles are very short and not so dark as the upper ones; they are seldom fully exerted*. Both the body and the tentacles are finely tubercled.

Foot narrow. *Tail* very long, extending nearly or quite to the apex; very slender and sharp-pointed on the sole, but broad and obliquely truncate above, with a gland distinctly projecting into a sharp angulation a little short of the end of the tail.

Jaw horny, crescentic, about .05 inch ($1\frac{1}{4}$ mill.) long (taken straight, not along the curve), and .01 inch (or $\frac{1}{4}$ mill.) wide. It is scored across with about 60 slightly converging ridges.

The *radula* consists of overhanging, long-pointed, 2-shouldered teeth fixed on a square base. The centre tooth is very small and extremely short, with a minute sharp overhanging point and very slight shoulders. The base to which it is attached is not square, but oblong like a narrow crescentic shoemaker's knife. On either side of this central tooth there are 50 lateral teeth; but as they go off to either side they become rudimentary and appear at last as mere square ticks. The outer shoulder tends earliest to recede towards the root of the tooth and to become rudimentary. There were at least 100 rows; but many of them had been lost.

* I have noted that they seemed to have minute eyes; but I could not quite satisfy myself of this.

LOVEA (ACHATINA) TORNATELLINA, Lowe.

Colour darkish grey, somewhat speckled, extending along above the foot to the tail-gland; the foot is gelatinous, translucent, lighter grey.

Mantle whitish with a very slight tinge of grey; it spreads well out beyond the lips of the aperture and is in perpetual movement upon the shell; it is simple, but extends backwards in a tongue half-way across the second last whorl.

Tentacles long, rather fine, the under ones rather short; they and the body finely tubercled.

Foot narrow. *Tail* extending quite to the apex of the shell, very slender, with a gland above just short of the end of the tail.

Jaws and *radula* exactly resemble those of *A. melampoides*, except that they are smaller.

LOVEA (ACHATINA) TRITICEA, Lowe.

Colour. General effect blackish; of the foot translucent white, with a faint tinge of olive-green. Body slightly smoky brownish, a streak of which runs out (above the light edge of the foot) on either side towards the caudal gland, but dies out just before reaching it.

Mantle coloured like the body, but rather lighter, stretching out round the aperture so as to embrace the shell.

Tentacles short, small, very black, with minute black dots of eyes on the upper point; under tentacles very short, lighter than the the upper; eyes distinct (?). Body and tentacles very finely tubercled.

Foot narrow. *Tail* long, narrow, ending below in a sharp point, with an abrupt truncation rising obliquely to a sharp angulation above for the caudal gland, which rises just short of the end of the tail.

Jaw and *radula* exactly like those of *Lovea melampoïdes*, only smaller.

LOVEA (ACHATINA) ORYZA, Lowe.

In every thing but colour this species exactly resembles the preceding.

Colour. General effect is a slight ruddy brownish, having no part dark but the muscles of the tentacles, of which the upper are dark black grey and the under are light.

Mantle is just like the body in colour. The projecting flap covering the caudal gland is very well marked.

The upper surface of neck and head and also the tentacles are finely tubercled, while the sides of the head and neck are marked by long fine lines as if the tubercles were there confluent in this form. The eyes are very black and well marked.

The animal, like the others which I have observed, crawls slowly and brings up its shell after it by periodic jerks.